

Appln. No. 10/814,032
Amtd. dated: March 21, 2006
Reply to Final Office Action dated December 27, 2005

Remarks/Arguments

These remarks are in response to the Final Office Action dated December 27, 2005. This reply is timely filed.

At the time of the Final Office Action, claims 1 and 3-15 were pending in the application. Claims 1 and 3-15 have been rejected under 35 U.S.C. §103(a). The rejections are set out in more detail below.

I. Brief Review of Applicants' Invention

Prior to addressing the Examiner's rejections on the art, a brief review of applicants' invention is appropriate. The invention relates to a system and method of tracking an entity. The entity can be a person or object. The invention includes two or more tracking stations in a wireless ad hoc network. An ad hoc network, also known as a peer-to-peer network, is a local area network or other small network in which some of the network devices are part of the network only for the duration of a communications session or while the network devices are within a defined proximity to each other. The tracking stations are in direct communication with one another.

Each entity is assigned a unique identifier. When the entity is located at the first tracking station, the first tracking station will determine the presence of the entity by detecting the entity's unique identifier. Then, the first tracking station will compare the entity's unique identifier data with a database of unique identifiers that are stored within the first tracking station. Based on a predicted transit path of the entity, the first tracking station wirelessly transmits the entity's unique identifier data to at least a second tracking station and to a logging station that logs information acquired from the first tracking station. Depending on the predicted transit path of the entity, only certain tracking stations will receive the entity's unique identifier, while other tracking stations will not. Such selective dissemination of information reduces the necessary bandwidth required for communications among the tracking stations.

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II. Claim Rejections Under 35 U.S.C. §103(a)

Claims 1 and 3-9

Claims 1 and 3-9 have been rejected as being unpatentable over U.S. Published Patent Application No. US 2004/0169589 to Lea et al ("Lea, et al.") in view of U.S. Published Patent Application No. US 2005/0087596 to Larson et al. ("Larson, et al."). Lea et al. discloses a passenger/object location system that includes one or more radio transceivers (known as remote masters or RMs) located at predetermined locations. The passenger/object is given an Electronic Tracking Clip (ETC) containing a transponder that is uniquely identified with the passenger/object. The ETC is distributed using an ETC Dispenser. The transponder device is adapted to transmit an RF signal in response to receiving an RF signal from one or more RM's. A passenger location means determines the position of the passenger/object transponder by determining the location of the one or more radio transceivers that actually received the transponder signal. The RM's that detect the particular transponder signal send their detection information wirelessly to a LAN Switch/hub and from the LAN Switch/hub to the Application Server. The Application Server contains the system application that uses an algorithm to approximate the present location of the ETC. Notably, the RM's do not communicate directly with each other. Rather, each RM communicates with LAN switches which in turn communicate with Application and Database Servers and other RM's. The Application Server displays the location ID associated with the RM and, thus, displays the location of an ETC. Database Servers will contain an updatable database of information regarding the passengers/objects.

Claim 1 recites that "wirelessly transmitting the unique identifier comprises selectively communicating the unique identifier to at least the second tracking station based on a predicted transit scenario of the entity." This step reduces network bandwidth by transmitting data, such as unique identifiers, to only those tracking stations that fall under the predicted travel route of the entity. Examiner asserts that Lea et al. teaches this limitation through its "step of analyzing the paths of travel of each

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individual over time from the location data received" (Lea et al. ¶43). However, Applicants respectfully disagree with Examiner's assertion. Lea et al. does not teach the use of a predicted transit scenario. Instead, Lea et al. merely teaches that a transponder's past and present location data are analyzed to recreate a single past transit path. Basically, Lea et al. shares data between RMs to determine where the transponder has traveled, but not to predict where the transponder may travel in the future. This is very different from Applicants' invention, which predicts a future transit path or paths (i.e. a predicted transit scenario) based on current location data.

Furthermore, Larson et al. fails to make up for the deficiencies of Lea et al. Larson et al. discloses methods and systems for managing personnel security at physical locations, namely security access points. The methods include respectively managing personnel security for one or more sponsor entities, vendor entities, and individuals associated with vendor entities. One of the methods disclosed by Larson et al. includes managing personnel security for a plurality of different sponsor entities from an administrator entity. The Larson et al. invention discloses that each access point location includes a computer with a processing unit, a wireless modem that is connected to a LAN network, a database of stored relevant data such as biometric data, and a card reader station that is capable of reading RFID security tags.

Notably, Larson et al. does not disclose or suggest selectively communicating a unique identifier to at least a second tracking station based on a predicted transit scenario of the entity. Applicants' invention, in contrast, offers a significant advantage over Larson by reducing the level of data traffic/bandwidth to the network. By determining a predicted transit scenario for an entity from a particular tracking station location, that tracking station can selectively transmit the entity's unique identifier to only those tracking stations who may be accessed by the moving entity. This feature advantageously reduces network bandwidth by transmitting data, such as unique identifiers, to those tracking stations that fall under the predicted travel route of the entity.

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According to MPEP 2143, to establish a *prima facie* of obviousness, the references must "teach or suggest all the claim limitations, " that is, all the features of the claimed invention. Neither Lea et al. nor Larson et al. teach the step of wirelessly transmitting a unique identifier by selectively communicating the unique identifier at one or more second tracking stations based on a predicted transit scenario. In view of the foregoing, a *prima facie* case for obviousness has not been satisfied. Applicants respectfully submit that claim 1 is not obvious in view of the cited references. The remaining dependent claims, 3-9, are believed to be patentable at least by virtue of their dependence upon an allowable base claim.

Claims 10-15

Claims 10-14 have been rejected as being unpatentable over Larson, et al. in view of Lea et al. Claim 15 has been rejected as being unpatentable over Larson et al in view of Lea et al, and in further view of U.S. Published Patent Application No. US 2004/0263319 to Houmo ("Houmo").

Before directly addressing the substantive obviousness rejection, Applicants wish to clarify the nature of their invention. Examiner states that Larson et al. "fails to show the method of [sic] wirelessly ad hoc network system to transmit the unique identifier to at least a second tracking station in order to determines [sic] a predicted transit scenario for an entity" (underlined emphasis added) (Office Action, page 7, lines 8-10). By the aforementioned statement, Examiner is suggesting that the transmission of the unique identifier is required to determine a predicted transit scenario. Applicants respectfully disagree with Examiner's interpretation of their invention. Applicants' invention teaches a wireless ad hoc network where a wireless network adapter transmits a unique identifier to one or more second tracking stations based on a predicted transit scenario that is determined prior to transmission of the unique identifier.

Addressing Examiner's rejection, claim 10 recites in part:

...wherein the processor determines a predicted transit scenario for an entity possessing the unique identifier and selectively identifies at least the second one of the tracking

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stations to which the unique identifier is transmitted based on the predicted transit scenario. (emphasis added)

Applicants' method claim 1 and apparatus claim 10 recite the selective transmission of a unique identifier based on a predicted transit scenario. Therefore, the foregoing arguments in support of claim 1 are equally applicable to claim 10.

According to MPEP 2143, to establish a *prima facie* of obviousness, the references must "teach or suggest all the claim limitations," that is, all the features of the claimed invention. Neither Lea et al. nor Larson et al. teach that a unique identifier is transmitted based on a predicted transit scenario. In view of the foregoing, a *prima facie* case for obviousness has not been met. Applicants respectfully submit that claim 10 is not obvious in view of the cited references. The remaining dependent claims, 11-15, are believed to be patentable at least by virtue of their dependence upon an allowable base claim.

III. Conclusion

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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